Distraction osteogenesis is a relatively new tool that is useful to treat patients with bone and soft tissue deficiencies that may not be amenable to traditional operations. As with any technique, it is important to understand when it is indicated and the underlying biomechanical principles that allow it to be used. In this issue, we have asked a group of innovative practitioners to share their experiences with this modality of treatment for a variety of problems encountered in the maxillofacial skeleton. The problems addressed range from continuity defects of the mandible secondary to oncologic procedures to craniofacial birth defects to deficiencies of dento–alveolar ridges. The results that are achieved from these experts are impressive. In the articles on the use of distraction in patients with severe craniofacial defects, it is apparent that sleep apnea is frequently a co-morbidity. Several of the authors note that the facial skeleton is normalized and sleep apnea ameliorated with distraction.

As with any technique, complications may occur. In most of the articles, the authors address the management of complications and review contributing causes. Drs. Hanson and Melugin specifically address orthopedic and orthodontic techniques that can be used when the desired occlusal result is not achieved through distraction. A real treat is the article contributed by Drs. Saunders and Lee on the influence of mechanical environment on bone healing and distraction osteogenesis. They review basic tenants of bone healing and how it is modified by distraction osteogenesis. In a relatively short essay, the complex nature of this fascinating tool is explained.

We hope the readers enjoy this issue of the *Atlas of the Oral and Maxillofacial Surgery Clinics* as much as we have enjoyed putting it together.

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